Claims

1. A method for diagnosing a predisposition for accelerated autosomal dominant polycystic kidney disease in a human subject comprising the steps of obtaining a biological sample containing nucleic acid from said subject, and detecting in said nucleic acid the presence of a single nucleotide polymorphism in the *ENOS* gene sequence, or the complement thereof.

2. A method according to claim 1 wherein said nucleic acid is DNA, cDNA, RNA or mRNA.

3. A method according to any of claims 1 or 2, wherein said single nucleotide polymorphism corresponds to the Glu 298 Asp polymorphism of the *ENOS* gene.

4. A method according to any of the claims 1-3, wherein said detection is accomplished by sequencing, mini sequencing, hybridization, restriction fragment analysis, oligonucleotide ligation assay or allele specific PCR.

5. An isolated polynucleotide comprising 10 contiguous nucleotides of the *ENOS* gene sequence or the complement thereof, and containing at least one single nucleotide polymorphism, wherein said single nucleotide polymorphism is associated with a predisposition for accelerated autosomal dominant polycystic kidney disease.

6. An isolated polynucleotide according to claim 5 wherein said single nucleotide polymorphism corresponds to the Glu 298 Asp polymorphism of the *ENOS* gene.

7. Use of a single nucleotide polymorphism of the *ENOS* gene sequence, or the complement thereof, for diagnosing accelerated autosomal dominant polycystic kidney disease in a human subject.

8. Use of a single nucleotide polymorphism according to claim 7, wherein said single nucleotide polymorphism corresponds to the Glu 298 Asp polymorphism of the *ENOS* gene.

9. A diagnostic kit comprising at least one isolated polynucleotide of at least 10 contiguous nucleotides of the *ENOS* gene sequence or the complement thereof, containing at least

one single nucleotide polymorphism, wherein said single nucleotide polymorphism is associated with a predisposition for accelerated autosomal dominant polycystic kidney disease; suitable reagents; and instructions for using said polynucleotide for detecting the presence of said single nucleotide polymorphism in a biological sample containing said nucleic acid.

10. A diagnostic kit according to claim 9 wherein said single nucleotide polymorphism corresponds to the Glu 298 Asp polymorphism of the *ENOS* gene.

11. A method for treatment of a human subject predisposed to develop accelerated autosomal dominant polycystic kidney disease comprising the steps of determining the predisposition of said subject by carrying out the method of any of claims 1-4, and administrating at least one NO-enhancing compound in said subject in need of said treatment.

12. A method according to claim 11, wherein said treatment counteracts the effect of said detected single nucleotide polymorphism.

13. A method according to any of claims 11-12 wherein said NO-enhancing compound comprises an effective amount of L- arginine, a NO donor or a mixture thereof.

14. A method according to claim 13 wherein said NO donor is molsidomine.

15. A method according to any of claims 11-13 wherein said effective amount of said L-arginine, NO donor or a mixture thereof is administered in a pharmaceutically acceptable formulation.

16. Pharmaceutical composition comprising L- arginine, a NO donor or a mixture thereof and a suitable excipient for treating predisposition to accelerated ADPKD in a human subject.

17. Use of a NO-enhancing compound in the preparation of a medicament for treating predisposition to accelerated ADPKD in a human subject.

18. Use of L- arginine in the preparation of a medicament for treating predisposition to accelerated ADPKD in a human subject.

19. Use of a NO donor in the preparation of a medicament for treating predisposition to accelerated ADPKD in a human subject.